**IN THE CLAIMS:**

Please amend the current claims as follows:

**Claim 1 (Previously Presented)**

A method for correlating raw transducer data in a system of transducers comprising the steps of:

communicating transducer data in a common format;

characterizing the transducer data and relationships between transducers in a common format;

defining interdependencies of transducers for modeling a system; and

time correlating the data from the various transducers.

**Claim 2 (Previously Presented)**

The method of claim 1 wherein the step of correlating the transducer data comprises the step of communicating the transducer in a common format.

**Claim 3 (Previously Presented)**

The method of claim 1 wherein the transducer data produces measurements of physical parameters.

**Claim 4 (Previously Presented)**

The method of claim 3 wherein measurements comprise samples of one or more physical parameters.

**Claim 5 (Previously Presented)**

The method of claim 4 wherein the one or more samples each comprise a transducer characteristic frames.

**Claim 6 (Previously Presented)**

The method of claim 5 wherein the transducer characteristic frames are communicated in clusters.

**Claim 7 (Previously Presented)**

The method of claim 2 wherein the data is communicated in clusters.

**Claim 8 (Previously Presented)**

The method of claim 7 wherein the clusters have time tags.

**Claim 9 (Previously Presented)**

The method of claim 8, wherein the time tag is representative of the state of a system clock at the time of the first sample of the cluster.

**Claim 10 (Previously Presented)**

The method of claim 2 wherein the data is communicated in a transducer markup language.

**Claim 11 (Previously Presented)**

The method of claim 2 wherein the transducer data is communicated without loss of fidelity.

**Claim 12 (Previously Presented)**

The method of claim 2 wherein the basis of the common format is a transducer characteristic frame.

**Claim 13 (Previously Presented)**

The method of claim 12 wherein the transducer characteristic frame has a dimension of data least 0, 1, 2, 3, or greater.

**Claim 14 (Previously Presented)**

The method of claim 1 wherein the common characterization expresses spatial, or temporal, or other relations between samples using a common transducer characteristic frame.

**Claim 15 (Previously Presented)**

The method of claim 14, wherein N spatial coordinates of each sample are expressed in a transducer characteristic frame.

**Claim 16 (Previously Presented)**

The method of claim 15, wherein N is the dimensionality of the TCF.

**Claim 17 (Previously Presented)**

The method of claim 1 comprising the step of expressing arbitrary properties and characteristics of transducers in a transducer characteristic frame.

**Claim 18 (Previously Presented)**

The method of claim 1 comprising using a transducer to model time varying properties of another transducer.

**Claim 19 (Previously Presented)**

The method of claim 16, comprising the step of specifying interdependencies between transducers as at least one of attached; dangling; position; and attitude; and derivatives thereof.

**Claim 20 (Previously Presented)**

The method of claim 1 further comprising the step of adding any number of additional transducers to the system and following the previously recited steps.

**Claim 21 (Previously Presented)**

The method of claim 1 comprising the step of calculating a specific time tag using a temporal transducer characteristic frame model.

**Claim 22 (Previously Presented)**

The method of claim 20 comprising calculating transducer time varying properties by interpolating values form other transducers using the specific time tag.

**Claim 23 (Previously Presented)**

The method of claim 20 comprising calculating external orientation of any transducer sample to a specified external reference system.

**Claim 24 (Previously Presented)**

The method of claim 23 wherein the external reference system comprises at least one of an external transducer and an earth centered earth fixed reference system.

**Claim 25 (Previously Presented)**

The method of claim 24 wherein transducers relate to an earth fixed reference system.

**Claim 26 (Previously Presented)**

The method of claim 1 further comprising storing the correlated transducer data for retrieval and processing at a time after correlation.

**Claim 27 (Cancelled)**

**Claim 28 (Cancelled)**

**Claim 29 (Cancelled)**

**Claim 30 (Cancelled)**

**Claim 31 (Cancelled)**

**Claim 32 (Cancelled)**

**Claim 33 (Cancelled)**

**Claim 34 (Cancelled)**

**Claim 35 (Cancelled)**

**Claim 36 (Cancelled)**

**Claim 37 (Previously Presented)**

Apparatus according to claim 24 further including display means for displaying selectable portions of the transducer data.

**Claim 38 (Cancelled)**

**Claim 39 (Cancelled)**

**Claim 40 (Cancelled)**

**Claim 41 (Cancelled)**

**Claim 42 (Currently Amended)**

A method for correlating raw transducer data in a system of transducers, wherein the transducer data produces measurements of physical parameters in the form of samples thereof, and where the samples each comprises a transducer characteristic frame, comprising the steps of:

communicating transducer data in a common format;

characterizing the transducer data and relationships between transducers in a common format; and

defining interdependencies of transducers for modeling a system;

time correlating the data from the various transducers.

**Claim 43 (Previously Presented)**

The method of claim 42 wherein the transducer

characteristic frames are communicated in clusters.

**Claim 44 (Previously Presented)**

A method for correlating raw transducer data in a system of transducers comprising the steps of:

communicating transducer data in a common format;

characterizing the transducer data and relationships between transducers in a common format expressing spatial, or temporal, or other relations between samples expressed in a transducer characteristic frame;

and wherein N coordinates of each sample are expressed in a transducer characteristic frame;

defining interdependencies of transducers for modeling a system; and

time correlating the data from the various transducers.

**Claim 45 (Previously Presented)**

A method for correlating raw transducer data in a system of transducers comprising the steps of:

communicating transducer data in a common format;

characterizing the transducer data and relationships between transducers in a common format;

calculating a specific time tag using a temporal transducer characteristic frame model;

defining interdependencies of transducers for modeling a system;

time correlating the data from the various transducers; and

calculating transducer time varying properties by interpolating values form other transducers using the specific time tag.

**Claim 46 (Previously Presented)**

A method for correlating raw transducer data in a system of transducers comprising the steps of:

communicating transducer data in a common format;

characterizing the transducer data and relationships between transducers in a common format;

defining interdependencies of transducers for modeling a system;

expressing arbitrary properties and characteristics of transducers ina transducer characteristic frame; and

time correlating the data from the various transducers

**Claim 47 (New)**

A method for capturing and processing data generated from first and second dissimilar transducers each of which normally transmit data in respectively unique formats, said method comprising the steps of causing aid first transducer to transmit data in a standardized hierarchal format; causing said second transducer to transmit data in said standardized hierarchal format; receiving said data in the form of said standardized hierarchal format from said first transducer; receiving said data in the form of said standardized hierarchal format from said first transducer; and processing said all of said received data.

**Claim 48 (New)**

A method for capturing and processing data generated from first and second dissimilar transducer each of which normally transmit data in respectively unique formats, said method comprising the steps of creating a model of said first transducer; creating a model of said second transducer; creating a hierarchal data format; causing said first transducer to transmit data only in said created hierarchal data format and only after first sending said created model of said first transducer; causing said second transducer to transmit data only in said created hierarchal data format and only after first sending said created model of said second transducer; receiving said transmitted model and data from said first transducer and said transmitted model and data from said second transducer and using said received models to process said received data.

**Claim 49 (New)**

The method of Claim 48 wherein said models are each transmitted in a common format.

**Claim 50 (New)**

The method of Claim 49 wherein each of said models are expressed with said standardized hierarchal format.